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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/942,608	08/31/2001	Rajesh R. Shah	219.40223X00	7484

7590

10/19/2005

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EXAMINER

SHINGLES, KRISTIE D

ART UNIT PAPER NUMBER

2141

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/942,608

Applicant(s)

SHAH ET AL.

Examiner

Kristie Shingles

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 July 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

***Response to Amendment***  
*Applicant has amended claims 7 and 15.*  
*Claims 1-23 are pending.*

### ***Drawings***

1. The proposed drawing corrections filed 7/29/2005 have been accepted by the Examiner.

### ***Claim Rejections - 35 USC § 112, second paragraph***

2. **Regarding claims 7 and 15**, previously rejected under 35 U.S.C. 112, second paragraph, the corrections made to the claim language has been accepted by the Examiner. The rejection under 35 U.S.C 112 is withdrawn.

### ***Response to Arguments***

3. Applicant's arguments filed 7/29/2005 have been fully considered but they are not persuasive.

A. Applicant argues, see Remarks page 11, that neither Talluri et al or Veghte et al teach when a topology change occurs in a subnet, determining if the topology change is in the list of topology changes created by the interested client; and if the topology change is in the list of topology changes created by the interested client, reporting a topology change event to the interested client.

A.1. The Examiner respectfully disagrees. It is the Examiner's position that the cited prior arts of reference: *Talluri et al* (US 6,748,429) and *Veghte et al* (US 6,246,409), in combination, teach the above limitations. As stated in the 35 USC § 103(a) rejection of independent claim 1, in the previous action, although *Talluri et al* fail to teach when a topology

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change occurs in the subnet, determining if the topology change is in the list of topology changes created by the interested client; and if the topology change is in the list of topology changes created by the interested client, reporting a topology change event to the interested client. *Veghte et al* teach determining a list of network resources (and added network resources) that are interesting to the user and reporting the network resource changes to the user (**col.3 line 53-col.4 line 65**). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Talluri et al* and *Veghte et al* for the purpose of aggregating the list of network topology changes according to the user's interest and notifying the user of such modifications made within the network; because it would provide a constant update mechanism for reporting the status of the network's topology and available resources to clients of the network. Therefore Applicant's arguments are non-persuasive and the rejection is maintained.

- B. Applicant argues, see Remarks page 11, that the "...*Veghte et al* patent does not even disclose or suggest an determining of topology changes or any reporting of topology changes. The Applicants respectfully submit that network resource changes are different than topology changes".

B.1. The Examiner respectfully disagrees. The cited prior art reference, *Veghte et al* is used in combination with *Talluri et al* achieve the above limitation. *Veghte et al* modify the cluster topology configuration system of *Talluri et al* by teaching a list of interests deemed relevant to a user and notifying the user of changes related to those interests in the list. In the case of *Veghte et al*, although the term "topology" is not disclosed in the reference, *Veghte et al* determines resource changes that are of interest to a user—and reporting those changes to the user (**Abstract, col.1 line 64-col.2 line 22, col.2 lines 25-50, col.5 lines 1-33**). *Veghte et al* further disclose that resources may comprise computer, files on a computer, software or

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peripheral devices on the network, such as printers (**col.1 lines 20-26, col.4 lines 1-14, col.5 lines 1-33**), which are connected to the user and associated with the network's topology.

In response to Applicant's argument that the *Veghte et al* patent does not even disclose or suggest an determining of topology changes or any reporting of topology changes, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

In response to Applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The *Veghte et al* reference is used as a secondary reference with *Talluri et al*, to show the obviousness of the invention with respect to the combination of the prior arts. The Examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, *Veghte et al* modify the cluster topology configuration system of *Talluri et al* by teaching a list of interests deemed relevant to a user and

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notifying the user of changes related to those interests in the list. Therefore Applicant's arguments are non-persuasive and the rejection is maintained.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims **1-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Talluri et al* (USPN 6,748,429) in view of *Veghte et al* (USPN 6,246,409).

a. **Per claim 1**, *Talluri et al* teach a method for reporting topology changes in a subnet of a switched fabric including at least a client, a subnet manager (SM) and switches interconnected via links, said method comprising: creating and reporting a list of topology changes that are interesting to the client for topology change notifications (**Col.4 Lines 55-67, Col.5 Lines 46-63, Col.6 Line 8-Col.7 Line 67**).

Yet *Talluri et al* fail to explicitly teach when a topology change occurs in the subnet, determining if the topology change is in the list of topology changes created by the interested client; and if the topology change is in the list of topology changes created by the interested client, reporting a topology change event to the interested client. However, *Veghte et al* disclose determining a list of network resources (and added network resources) that are interesting to the user and reporting the network resource changes to the user (**Col.3 Line 53-Col.4 Line 65**).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Talluri et al* and *Veghte et al* for the purpose of aggregating the list of network topology changes according to the user's interest and notifying the user of such modifications made within the network; because it would provide a constant update mechanism for reporting the status of the network's topology and available resources to clients of the network.

b. **Claims 11 and 19** contain limitations substantially equivalent to claim 1 and are therefore rejected under the same basis.

c. **Per claim 2, *Veghte et al*** teach the method as claimed in claim 1, wherein said list of topology changes is created by the client to serve as client-defined filters that specify the types of topology changes the client is interested in receiving notifications (**Col.4 Lines 5-39**).

d. **Claims 12 and 29** are substantially equivalent to claim 2 and are therefore rejected under the same basis.

e. **Per claim 3, *Veghte et al*** teach the method as claimed in claim 2, wherein said list of topology changes includes, but is not limited to, when a new data path is created between a pair of end nodes in the subnet, when an existing data path is destroyed between a pair of end nodes in the subnet, when a new device is inserted in the subnet, and when an existing device is removed from the subnet (**Col.4 Line 54-Col.5 Line 20**).

f. **Claims 13 and 21** are substantially equivalent to claim 3 and are therefore rejected under the same basis.

g. **Per claim 4, *Talluri et al*** teach the method as claimed in claim 1, wherein said client corresponds to an end node of the subnet having at least one channel adapter (CA)

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installed to support one or more ports for data communication via said links of the subnet (**Col.4 Line 55-Col.5 Line 27**).

h. **Per claim 5, Talluri et al** teach the method as claimed in claim 2, wherein said determining the topology change in the list of topology changes and said reporting the topology change events to the interested client are executed by said subnet manager (**Col.5 Line 46-Col.6 Line 25 and Col.7 Lines 56-67**).

i. **Per claim 6, Talluri et al** teach the method as claimed in claim 5, wherein said subnet manager (SM) is installed in another end node of the subnet, and is implemented either in hardware or software to provide management services for all switches and end nodes in the subnet (**Figure 3 and Col.5 Lines 28-62**).

j. **Claims 7, 14 and 15** are substantially equivalent to claim 6 and are therefore rejected under the same basis.

k. **Per claim 8, Talluri et al** teach the method as claimed in claim 5, wherein said subnet manager (SM) is installed in another end node of the subnet for discovering the subnet topology, assigning unique addresses to all ports that are connected to the subnet, and establishing possible data paths among all ports by programming switch forwarding tables for download to the switches in the subnet for routing data packets to destinations via possible data paths established between switch pairs (**Col.5 Lines 45-62**).

l. **Claim 16** is substantially equivalent to claim 8 and is therefore rejected under the same basis.

m. **Per claim 9, Veghte et al** teach the method as claimed in claim 1, wherein said client sends a VendorSet (SetNotificationFilter) message to the subnet manager (SM) after the



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list of topology changes is created to indicate the topology changes that require client notifications, and said subnet manager (SM) sends a VendorGetResp (SetNotificationFilter) message back to the interested client to confirm receipt of the list of topology changes that the client is interested (Col.3 Line 41-Col.5 Line 49).

n. **Claims 17 and 22** are substantially similar to claim 9 and are therefore rejected under the same basis.

o. **Per claim 10**, *Talluri et al* teach the method as claimed in claim 1, wherein said subnet manager (SM) sends a VendorSend (TopologyChangeNotification) message to the interested client after the topology change is determined in the list of topology changes to notify the topology change that occurred, and said client sends a VendorSendResp (TopologyChangeNotification) message back to the subnet manager (SM) to acknowledge the topology change notification (Col.5 Line 45-Col.8 Line 17).

p. **Claims 18 and 23** are substantially equivalent to claim 10 and are therefore rejected under the same basis.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Natarajan et al* (USPN 6,584,502), *Sugano et al* (USPN 6,205,478), *Hemphill et al* (USPN 6,490,617), *Moshaiov* (USPN 6,678,726), *Yanagawa* (USPN 6,667,992).

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Kristie Shingles*  
Examiner  
Art Unit 2141

kds

  
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SUPERVISORY PATENT EXAMINER